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# NASA Policy Directive

**NPD 8500.1C**

Effective Date: December 02, 2013

Expiration Date: December 02, 2023

**COMPLIANCE IS MANDATORY FOR NASA EMPLOYEES**[Printable Format \(PDF\)](#)

Request Notification of Change (NASA Only)

**Subject: NASA Environmental Management (Revalidated w/Change 2, on October 29, 2018)****Responsible Office: Environmental Management Division****CHANGE LOG**

Chg#	Date	Description/Comments
2	10/29/2018	Added and updated responsibilities to accurately reflect external requirements, current policy and operations. Specifically: (1) Updated references to reflect recent EO 13834 and remove outdated EO references, (2) deleted certain delineated responsibilities from NPD 8500.1 where redundant with NPRs, (3) added EMD Director's authority for environmental requirements applicability, and (4) modified style and format to meet current NPR 1400.1 requirements.
1	08/01/2018	Deleted an existing requirement from Section 5.(f)2 from NPD 8500.1 and (renumbered 1-7).

**1. POLICY**

a. It is NASA's policy to:

(1) Comply with all applicable requirements of Federal statutes, regulations, and Executive Orders (EO); state, local, or territorial environmental laws and regulations; and NASA's requirements and agreements with other agencies, industry, and organizations.

(2) Incorporate environmental risk reduction and sustainable practices to the extent practicable throughout programs, projects, and activities, including planning, development, implementation, and operational phases; to create and maintain conditions under which the mission, humans, and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans.

(3) Consider environmental factors throughout the life cycle of programs, projects, and activities (as defined in NPD 7120.4, and related documents), including planning, development, execution, and disposition activities.

(4) Execute NASA's mission without compromising the planet's resources so that future generations can meet their needs. This NASA Policy Directive (NPD) has been issued to align with, and incorporate by reference, 14 CFR pt. 1216.

(5) Apply NASA's scientific expertise and products so that climate information can be incorporated in NASA decision making and planning; create innovative, sustainable, and flexible solutions; and share best practices to create

climate-resilient NASA Centers.

(6) Develop collaborative partnerships with Federal, state, local regulatory agencies, international entities, and governmental/nongovernmental and commercial organizations to leverage available and shared resources; improve materials and processes; identify, help develop, and comply with environmental requirements; prevent pollution; reduce waste generation; and manage cultural and natural resources in the most effective manner possible.

(7) Maintain an environmental management system, as implemented by NPR 8553.1, at all appropriate organizational levels. The environmental management system will address compliance obligations, risks, and opportunities; establish priority environmental aspects and impacts associated with NASA's activities, products, and services; provide a framework for setting and reviewing environmental objectives and targets; and establish processes for communicating environmental information to persons working for or on behalf of NASA and the public. The environmental management system will be used to address all environmental risks and opportunities of internal NASA operations and activities.

(8) Commit to prevention of pollution and continual improvement of the NASA environmental program.

(9) Ensure that environmental liabilities and compliance are addressed appropriately within Space Act Agreements and tenant, customer, or similar arrangements.

(10) Ensure that hazardous waste generated solely by onsite non-NASA organizations/agencies (e.g., tenants, customers) is manifested and disposed of using the non-NASA organization's/agency's Environmental Protection Agency identification number (EPA ID), as required by 42 U.S.C. 82. Although these organizations/agencies may independently use the same companies under contract to NASA for disposal of hazardous wastes, NASA EPA ID numbers will not be used for disposing non-NASA hazardous wastes, unless waived by the appropriate authority. (See section 5b (7).)

## **2. APPLICABILITY**

a. This NPD is applicable to NASA Headquarters and NASA Centers, including Component Facilities and Technical and Service Support Centers.

b. This language applies to the Jet Propulsion Laboratory (JPL), a Federally Funded Research and Development Center (FFRDC), other contractors, or parties to agreements only to the extent specified or referenced in the appropriate contracts, grants, or agreements.

c. In this directive, the terms "may" or "can" denote discretionary privilege or permission, "should" denotes a good practice and is recommended, but not required, "will" denotes expected outcome, and "are/is" denotes descriptive material.

d. In this directive, all document citations are assumed to be the latest version unless otherwise noted.

## **3. AUTHORITY**

a. National Historic Preservation Act of 1966, as amended, 16 U.S.C. 470, et seq.

b. National Environmental Policy Act of 1969, as amended, 42 U.S.C. 4321, et seq.

c. National Energy Conservation Policy Act, as amended, 42 U.S.C. 8251, et seq.

d. National Aeronautics and Space Act, as amended, 51 U.S.C. § 20113 (a).

## **4. APPLICABLE DOCUMENTS AND FORMS**

a. Resource Conservation and Recovery Act, as amended, 42 U.S.C. 82, et seq.

b. Preserve America, E. O. 13287, 68 Fed. Reg. 10635 (March 5, 2003).

c. Efficient Federal Operations, E. O. 13834, 83 Fed. Reg. 23771 (May 22, 2018).

d. Environmental Quality, 14 CFR pt. 1216.

e. NPD 7120.4, NASA Engineering and Program/Project Management Policy.

f. NPR 8510.1, NASA Cultural Resources Management.

- g. NPR 8553.1, NASA Environmental Management System.
- h. NPR 8570.1, NASA Energy Management Program

## 5. RESPONSIBILITY

a. The Assistant Administrator for Strategic Infrastructure is responsible for:

- (1) Providing executive and functional leadership for environmental management.
- (2) Advocating for, supporting, managing, allocating, and assigning environmental resources, as defined and budgeted by the Agency, including applicable financial accounting and reporting responsibilities in cooperation with and in support of the Mission Directorates, Mission Support Offices, and NASA Centers and Component Facilities .
- (3) Serving as the NASA senior official for external Agency-level interfaces on domestic environmental matters and supporting the Office of International and Interagency Relations and the Office of the General Counsel on international environmental matters.
- (4) Serving as the Agency Chief Sustainability Officer, in accordance with E. O. 13834.
- (5) Serving as the Senior Policy Official and designating the Federal Preservation Officer, in accordance with 16 U.S.C. 470 and E. O. 13287, to accomplish the responsibilities in NPR 8510.1.
- (6) Designating the Agency Energy Program Manager and the NASA member of the Interagency Energy Management Task Force established by 42 U.S.C. 8251 to accomplish the responsibilities in NPR 8570.1.

b. The Director, Environmental Management Division is responsible for:

- (1) Developing, maintaining, and executing the Agency's environmental management strategy, policy and guidance.
- (2) Establishing requirements for the NASA environmental management system, including guidance for Centers to identify and prioritize environmental aspects, impacts, risks, opportunities, objectives, and targets. Periodically reviewing the NASA environmental management system status at Headquarters and across the Agency and reporting significant issues to senior Agency officials.
- (3) Providing functional oversight and conducting functional reviews to ensure that environmental activities are conducted in accordance with statutory, regulatory, and financial accounting and reporting requirements. Functional review results will be reported to Center Directors and appropriate Agency officials when Agency-wide issues, problems, successes, and opportunities are involved.
- (4) Providing technical advice and assistance to and consulting with managers responsible for Mission Directorates, Mission Support Offices, and NASA Centers and Component Facilities based on overall awareness and insight of Agency program execution and national and international requirements.
- (5) Ensuring appropriate coordination and approval of Principal Centers to lead or oversee designated environmental initiatives or activities.
- (6) Advocating for and supporting effective development and execution of environmental and energy conservation training, including professional development and education initiatives that promote the knowledge and proficiency of the NASA workforce for understanding the requirements, concepts, and techniques of environmental management and sustainable practices.
- (7) Serving as the approval authority for waiver requests regarding non-NASA-generated hazardous wastes. (See section 1a(10))
- (8) In consultation with HQ Office of General Counsel, serves as authority for environmental requirements applicability for the Agency.

c. Associate Administrators, Assistant Administrators, Chiefs, Directors of Mission Directorates and Mission Support Offices, and program and project managers are responsible for:

- (1) Implementing environmental policies and requirements within existing missions, programs, projects, and activities, including life-cycle planning, development, execution, and disposition activities.
- (2) Ensuring that requirements of 42 U.S.C. 4321 are satisfied for any proposed new or modified missions, programs, projects, and activities.
- (3) Coordinating with the affected Center environmental managers on both existing and new missions, programs,

projects, and activities to ensure compliance with law, awareness of emerging laws and regulations, and effective implementation of environmental requirements.

d. Center Directors are responsible for:

- (1) Ensuring that the Center and each Component Facility under their scope of responsibility have an appointed environmental manager with the authority to accomplish the responsibilities of section 5e.
- (2) Providing sufficient qualified staff and other required resources to perform environmental compliance and energy and water conservation activities, maintain the environmental management system, and implement sustainability practices.
- (3) Ensuring implementation of Agency environmental management functional leadership activities, policies, regulations, and procedural requirements.
- (4) Ensuring effective development and execution of environmental management training, including professional development and education initiatives that promote the knowledge and proficiency of the NASA workforce in environmental management concepts and techniques.
- (5) In collaboration with NASA Headquarters Office of Strategic Infrastructure, establishing oversight of and evaluating Center operations through functional reviews, performance metrics, or other means to ascertain that appropriate environmental compliance and management techniques are used for identifying, documenting, evaluating, and executing all environmental requirements for programs, projects, facilities, systems, and operations. This includes responding to environmental and energy data calls from Headquarters.
- (6) Supporting effective environmental communication within the Center and with the interested community.

e. Center and Component Facility environmental managers are responsible for:

- (1) Coordinating with all internal organizations to ensure compliance with the law and effective implementation of environmental policies, procedures, and processes to reduce risk to mission.
- (2) Advocating for, managing, and allocating assigned environmental program resources, both for the Environmental Compliance and Restoration Program and programs supported by Center resources or direct reimbursements.
- (3) Serving as the local source of expertise on environmental policies, procedures, requirements, and processes.
- (4) Supporting functional reviews to ensure that Center programs, projects, facilities, systems, and operations comply with all environmental requirements.
- (5) Serving on NASA advisory boards, panels, and working groups in accordance with their charters as coordinated and approved by local and Headquarters senior management.
- (6) Reporting information regarding environmental management activities to the Director, Environmental Management Division.

f. Each NASA organizational element is responsible for managing environmental requirements and impacts by:

- (1) Incorporating this environmental policy into the earliest stages of program and project planning, budgeting, and implementation.
- (2) Allocating and maintaining appropriate levels of authority and funding.
- (3) Ensuring appropriate training is provided.
- (4) Overseeing environmental requirements applicable to process and material selection.
- (5) Incorporating sustainable practices in its missions and activities.

g. Every NASA employee is responsible for:

- (1) Complying with environmental regulations and NASA environmental policy related to official duties.
- (2) Helping achieve environmental objectives and targets applicable to their organizational level. .

## 6. DELEGATION OF AUTHORITY

None.

## 7. MEASUREMENT/VERIFICATION

The majority of environmental and energy regulations include specific requirements to assess compliance. These requirements are monitored by external regulatory agencies and through Headquarters environmental functional reviews to ensure compliance with requirements of the relevant laws. NASA's internal metrics for environmental management cover compliance, restoration, and conservation measures to meet reporting requirements of the Office of Management and Budget and other external oversight agencies.

## 8. CANCELLATION

a. NPD 8500.1B, NASA Environmental Management, dated December 20, 2007.

b. NID 8500-81, NASA Interim Directive (NID) on Tenant-Generated Hazardous Waste, dated November 26, 2012.

REVALIDATED ON October 29, 2018

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/s/ Charles F. Bolden, Jr.  
Administrator

## ATTACHMENT A. Definitions

**Environmental Factors.** Environmental factors include, but are not limited to, considering environmental impacts as required by 42 U.S.C. 4321 and 16 U.S.C. 470; the proposed use of hazardous materials; the potential for waste generation; the need to acquire necessary permits, waivers, and authorizations; and using environmentally preferable materials and processes wherever practicable. Include in the life-cycle analysis of costs, the potential environmental impacts of programmatic activities and the use of materials that may be affected by or phased out of production due to international and domestic environmental laws and regulations and their supporting institutional processes and costs of mitigating such impacts.

**Environmental management.** Environmental management is a cross-cutting management strategy of the NASA Strategic Plan, supports NASA's missions, protects mission resources, and mitigates environmentally driven mission risks. It maintains environmental stewardship of assets, controls over environmental responsibilities, and compliance with applicable legal and other requirements. In implementing these principles, NASA environmental management includes:

- Providing direct mission support by implementing environmental planning elements in the earliest stages of program and project planning.
- Implementing proactive measures to reduce NASA's exposure to environmental, institutional, programmatic, and operational risks.
- Pursuing environmental initiatives and objectives designed to protect, restore, and enhance mission resources.

**Sustainable Practices.** Aligning with E. O. 13834, sustainable practices include, but are not limited to:

- Improving energy efficiency and reduction of energy consumption and greenhouse gas emissions;
- Using clean and renewable energy;
- Improving water efficiency and reducing water consumption;
- Acquiring environmentally preferable products and services, such as those that have recycled content, are energy-efficient, and are biobased;
- Reducing use and disposal of toxic and hazardous chemicals and materials;
- Instituting waste-prevention and recycling programs;
- Constructing and commissioning high-performance and sustainable buildings;
- Instituting efficient fleet-management programs;
- Ensuring electronics stewardship;
- Practicing green engineering; and

- Taking actions to improve climate change resilience of critical Agency assets.

## **ATTACHMENT B. Acronyms**

CFR Code of Federal Regulations

E. O. Executive Order

EPA ID Environmental Protection Agency Identification Number

NPD NASA Policy Directive

NPR NASA Procedural Requirements

## **ATTACHMENT C. References**

- a. NPD 1001.0, NASA Strategic Plan.
- b. NPR 8530.1B, NASA Sustainable Acquisition.
- c. NPR 8580.1, Implementing the National Environmental Policy Act and Executive Order 12114.
- d. NPR 8590.1A, Environmental Compliance and Restoration Program.

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